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08/187,675 01/27/94 AULT

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EXAMINER

BANANKHAN, M

B3M1/0418

ART UNIT

PAPER NUMBER

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INTELLECTUAL PROPERTY LAW, 31BA/058  
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2016

DATE MAILED:

04/18/95

This is a communication from the examiner in charge of your application.  
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☒ Responsive to communication filed on 1/27/94 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), 0 days from the date of this letter.  
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

**Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice of Draftsman's Patent Drawing Review, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.                 | 4. <input type="checkbox"/> Notice of Informal Patent Application, PTO-152.       |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474.     | 6. <input type="checkbox"/> _____   |

**Part II SUMMARY OF ACTION**

1. ☒ Claims 1-14 are pending in the application.

Of the above, claims \_\_\_\_\_ are withdrawn from consideration.

2. ☐ Claims \_\_\_\_\_ have been cancelled.

3. ☐ Claims \_\_\_\_\_ are allowed.

4. ☒ Claims 1-14 are rejected.

5. ☐ Claims \_\_\_\_\_ are objected to.

6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on \_\_\_\_\_. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice of Draftsman's Patent Drawing Review, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on \_\_\_\_\_, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved; ☐ disapproved (see explanation).

12. ☐ Acknowledgement is made of the claim for priority under 35 U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_; filed on \_\_\_\_\_.

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

**EXAMINER'S ACTION**

**Part III DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. Claim 1-14 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) Per claim 1:

In the preamble, in line 3-4, the "external event" is vague because it is not clear it is external to whom. Is it external to the first, second, or common address. Additionally, it is unclear in the art of data processing what "the handling" of an external event is meant to be.

In line 3, "facilitating" is vague and indefinite because, it is unclear facilitating constitute what steps.

In the first step of "sending a quiesce", it is unclear based on what criteria the quiesce event is send. Moreover, who is sending the event, i.e., is there a human operator involved or a program automatically and in response to some other action.

b) Per claim 5:

On the subject of external object, the rejection of this claim falls within the same scope language as claim 1.

c) Per claim 6, and 7:

The statement "said second thread to terminate" in claim 6, and "said second thread to suspend" is incomplete and does not

indicate from what function "termination", and "suspension" is taking place respectively.

d) Per claim 8:

In the statement "sending quiesce event from one thread to ...", there is no clear antecedent base for "one thread". Additionally, in the statement "to give control", it is unclear control of what element it is referring to.

e) Per claim 9:

The statement "holding any critical resource" is vague because, it is unclear what critical is to be interpreted here. Additionally, it is unclear based on what steps the determination is accomplished.

f) Per claim 10:

The rejection of this claim falls within the same scope language of claim 9.

g) Per claim 12:

The rejection of this claim falls within the same scope language of claim 1.

h) Per claim 13, and 14:

The statement "quiesce event" does not have proper antecedent basis. Additionally, the statement "is suspended" is mentioned twice.

i ) Per claim 2-4, and 11:

These claims are rejected because of the rejection of their parent claim.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

3. Claims 1-14 are rejected under 35 U.S.C. § 103 as being unpatentable over Jackson (U.S.Pat. No. 5,297,274) in view of Anschuetz et al. (U.S.Pat. No. 5,305,455).

Jackson taught the invention substantially (e.g. claims 1, and 5) as claimed including a method in a data processing system for implementing a sampling performance analysis for a selected application within a multi-thread operating system, in which the method is capable of performing the steps of:

- a. generating break point interrupts by the separate running thread program during execution of selected application;
- b. suspending execution of said application;

c. examining said selected application utilizing trace function and storing an indication of a current execution location within said selected application at said suspension for utilizing in performance analysis;

d. resuming execution of selected application, See abstract, Fig.3, column 1 lines 64-68, column 2 lines 14-21.

Anschuetz et al . in the same field of endeavor teach of a data processing system operable in a multi-tasking mode to include at least one process having a plurality of threads. In Anschuetz's invention, exception management is done on a per thread basis. Further when a process termination exception occurs, each thread is accessed to execute any process termination exception handler associated with the thread, See abstract, Fig. 1, column 2 line 5-27, in order for delivering process termination exception to each thread of the process that is terminating and accessing each thread to execute any process termination exception handler associated with the thread.

Therefore, it would have been obvious for one ordinary skill in the art of data processing to combine the teaching of Jackson, with the "per thread exception management" of Anschuetz et al. for the purpose of delivering process termination exception to each thread of the process that is terminating and accessing each thread to execute any process termination exception handler associated with the thread.

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Art Unit: 2316

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### **Conclusion**


4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a) U.S. Pat. No. 5247675, Farrell et al., Sep. 21, 1993.
- b) U.S. Pat. No. 5012409, Fletcher et al. Apr. 30, 1991
- c) U.S. Pat. No. 5404521, Murray, Apr. 4, 1995.
- d) U.S. Pat. No. 5319782, Goldberg et al., Jun. 7, 1994.
- e) Performance of Multi-Thread execution in a shared-memory multi-processor, Preceding of the Third IEEE symposium on parallel and distributed processing: IEEE Comp. Soc. Press, Los Alamitos, CA, USA.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Majid A. Banankhah whose telephone number is (703) 308-6903.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

Majid A. Banankhah  
April 14, 1994

  
KEVIN A. KRIESS  
PRIMARY EXAMINER  
GROUP 2300